

IMPLANTABLE DEVICES AND METHODS USING FREQUENCY-DOMAIN ANALYSIS OF THORACIC SIGNAL

ABSTRACT

5 This document describes, among other things, systems, devices, and methods that use frequency domain analysis of a thoracic signal. One example uses frequency domain analysis for discriminating between different pulmonary physiological states. Examples of breathing states include normal breathing, periodic breathing, Cheyne-Stokes breathing, obstructed respiration, restrictive
10 respiration, and pulmonary edema. The frequency domain analysis may also be used for performing heart rate variability (HRV) diagnostics. In one example, a frequency domain adaptive filter implements a variable cutoff frequency for separating heart contraction spectral content and other spectral content from lower frequency respiration spectral content and other lower frequency spectral content.

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